

heads; or it may consist of two birotulates joined together in the form of a cross, and thus present four heads. All the sponges just mentioned, too, possess anchoring-spicules of two kinds, viz. spiniferous and smooth, of which the free or anchoring end of the former terminates in two recurved spines or hooks opposite. But these spicules in all are free, and flow from all parts of the base, not twisted into a compact cord like those of *Hyalonema*, which also traverses the body of the latter, as before stated, in the same form, rendering it solid in the centre, which solidity is replaced, in all the other sponges above mentioned, by a central excavation more or less cylindrical, large, and deep.

In *Pheronema Annæ*, however, this cavity is not wide as in *Holtentia*, but narrow as in *Meyerina claviformis*, and in like manner branches off at the bottom, which is some distance above the base of the sponge. Prof. Leidy describes it as a "canal," whose orifice is only four lines in diameter, descending in the axis of the sponge for "almost half its depth," when it appears to divide into several branches. This is very like the cavity in *Meyerina claviformis*. (For a description and figure of *Pheronema Annæ*, see 'Month. Microscop. Journ.' June 1, 1869, vol. i. p. 36; and 'American Naturalist,' 1871, vol. iv. p. 17.)

Labaria hemispherica, although possessing the birotulate spicule, is, in addition to the bird's-nest form of its body, distinguished from all the rest by the terminations respectively of its spiniferous and smooth anchoring-spicules, especially the latter (Pl. XIV. figs. 1 & 2). While that of the former consists of a tumid head armed with two round recurved spines opposite like the flukes of an anchor (fig. 1), that of the smooth spicule consists of a compressed head and two compressed spines or arms expanded in the form of a crescent or leather-cutter's knife to double the breadth of the spines on the head of the spiniferous spicule (fig. 2). *Labaria* is the only sponge possessing the two kinds of anchoring-spicules in which I have seen the termination of the *smooth* form.

Euplectella cucumer, which finishes my list, has already been noticed in connexion with *E. aspergillum* and *Habrodictyon*.

[To be continued.]

XLV.—On three new Species of Birds from Chefoo (North China). By ROBERT SWINHOE, H.B.M. Consul at Chefoo.

1. *Golden-sided Grey Thrush*.

This thrush was shot on the 14th May, on Lighthouse Is-

land, at the entrance to this harbour. I would dedicate it to Mr. Campbell, the keeper of the lighthouse, to whom I am indebted for many good birds during this spring season of migration.

Turdus Campbelli, sp. nov.

All the upper parts dusky slaty ash-colour; quills and rectrices hair-brown on their inner webs. Throat pale yellowish ashy; breast ashy; centre of lower breast, belly, and under tail-coverts white; the side-feathers of the last with their outer webs yellowish alongside the stems, broadly margined with hair-brown. Sides of lower breast and belly, tibial feathers, and axillaries rich yellowish or golden chestnut, the same washing the basal portions of the inner webs of most of the rectrices on their underside.

Length of fresh bird about 9 inches. Wing 4·7; first quill 0·35 shorter than second, which with the third is the longest in the wing; fourth 0·1 shorter; the wing falls 2·15 short of tail-tip. Tail 3·4, of twelve equal pointed or mucronate feathers; under tail-coverts 1·2 short of tail. Bill in front 0·82, from gape 1·05; tarse 1·23; middle toe 0·9, its claw 0·28.

Bill, inside of mouth, and skin round eye orange-yellow; legs and claws the same.

The specimen from which the description was taken proved a male on dissection, with enormous testes, showing that the bird was on the point of breeding. It will be seen that the above diagnosis of this novelty agrees closely with that of Jerdon ('Birds of India,' vol. i. p. 519) of the *Geocichla unicolor*, Blyth, of North India, as to size, and a good deal as to coloration. The main difference consists in the richer rufous on the underparts of our bird being otherwise distributed, and in the markings of the under tail-coverts.

2. *Golden-billed Button-quail*.

In August 1860, during the North-China campaign, on our march from Tientsin to Peking, I came across two French officers shooting in a field of millet. They had knocked over a Button-quail, which seemed to me richer in colour than our South-China species; but I got no specimens myself, and I set it down as the same. Soon after my arrival at this place the Buttons began to come (commencement of May), and for the first week or so all brought to market were females; the males arrived later on. The Chinese here call them "Hwanglan," and prefer the females for their superior size and pugnacious proclivities, and fight them as they do quails. The

male is small and objects to the "noble art." By their brilliant colouring and fruity yellow bills and legs I saw that I had got a species I had not met before. In my "Revised Catalogue of the Birds of China" (P. Z. S. 1871) I noted that I had made a mistake in identifying our South-China bird with *Turnix maculosa*, Temm., and gave it the name *Hemipodius vicarius*. This species I have procured as far north as Shanghai. In Père David's "Catalogue des Oiseaux à Pékin" (Nouv. Arch. du Muséum d'Hist. Nat. de Paris, tome iii. 1867) the Pekin species is marked as *T. maculosa*, Temm. This may be in copy of my first error, or on the belief that it really is the same as Temminck's bird, which was supposed to be from New Holland. I believe the present species to be distinct, and propose to distinguish it as

Hemipodius chrysostomus, sp. nov.

The female in full plumage has the entire face, breast, flanks, and vent yellowish buff, much deeper and strongly tinged with rust-colour on a central patch down the middle of the breast, with black spots more or less hidden on the sides of the breast. Feathers on the top of the head black, bordered with cream- and rust-colour, with a streak of cream-colour down centre of head. Broad half-collar on hind neck fine rust-colour, dotted with light reddish. Back and rump variegated with yellowish-grey, cream-colour, black, and bright rust-colour. Wing-coverts yellowish buff, greyish near bend and edge of wing, with black spots; quills light hair-brown, the first two primaries being edged with yellowish, the rest with brownish, mottled with a deeper brown. Axillaries light brownish buff. Tail-feathers light brown, obscurely mottled with blackish somewhat in the form of bars.

The male in plumage resembles the females not fully developed in having the throat whitish, the underparts less tinged with buff, with no rust-colour on the pectoral median patch, in having the wing-coverts more or less brownish, with only a little buff, and in having only a little of the rich mottling and spots on the upper parts, with but a slight indication of the nuchal half-collar. He differs, however, from them in having smaller and more numerous spots on the sides of the breast.

I took the following note on view of two fresh specimens, which afterwards proved on dissection to be females:—

Length 6·75. Wing 3·8, rounded; first, second, and third quills nearly equal and longest, fourth a little shorter; wing falls 0·35 short of tail, and is 0·4 longer than tertiaries. Tail of eight soft graduated feathers, 1·35 long. Iris cream-white;

bill fine golden yellow; inside of mouth flesh-colour. Bill from forehead 0·55, from gape 0·82; depth at base 0·25. Tarse in front 0·98; middle toe and claw 0·84. Legs, toes, and claws rich honey-yellow. Ovary well developed; trachea with a globular swelling just above where it reaches the bronchi.

Of the fresh male I noted:—Length 5·75. Wing 3·3; quills 0·2 longer than tertiaries, 0·55 short of tail-tip. Tarse in front 0·85; middle toe and claw 0·82. Bill in front 0·45, from gape 0·7. Bill brown on upper mandible, lighter on apical third of lower, rich golden yellow on basal edge of upper and whole of basal two-thirds of lower including rictus. Iris and legs as in female. Testes enormous, evidently on the point of breeding; trachea narrower than in the female and without swelling.

This species differs from *H. viciarius* of South China in having the remiges broader and shorter. Its bill is deeper at the base, and more distinctly marked; its legs are of a richer colour; its plumage above is more richly and definitely marked with black and red. It has a well-marked breast-patch, a nuchal half-collar, and a central streak to the crown of its head.

3. *White-winged Quail Crake.*

In company with Baillon's crake was brought a very charming little species, to me quite unknown, and, I think, new to science. From its feathered *tibia* and short tarse and toes it looks like a diminutive corn-crake; but its speckled upper plumage links it to the *Porzana* crakes, while its rounded wings remove it from both. As it lies on the table it might be taken for a small quail; and I therefore fancy its affinities lie for *Coturnicops noveboracensis* (Gmel.) of Eastern North America, though I have not seen a specimen of that bird, nor have I a good description of it. My single specimen is a female, which I will proceed to describe as

Porzana exquisita, sp. nov.

Size of a small Button-quail. Prevalent colour of head, neck, flanks, and upper parts rich vandyke-brown; on the crown the greater portion of each feather is black, the brown being confined to a narrow margin; on the back of the neck, the back, and the scapulars the centres are black with broad brown margins, thus showing alternate longitudinal lines of broad black and narrower brown; the greater part of the wing-coverts are brown alone. The throat, a broad patch on the shoulder-edge, axillaries, and centre of breast and belly

are white. The eyebrow and face are minutely spotted with white; the upper parts, except the crown, have transverse bands of white extending across the breadth of the black in each feather, the feathers of the hind neck having one band, the dorsals mostly two narrower ones, the scapulars three, and the wing-coverts more scattered ones. The feathers of the hind neck have their margins and a lower hidden band white. The flanks, the tibials, and the under tail-coverts are brown, with a double band of white. The tail is black, each feather with two narrow cross bars of white. The ten primaries of the wing are light hair-brown, the first white on the outer web; the seven secondaries white on their apical two thirds, light brown on basal third, the first of the series having the white mottled with brown.

Bill deep brown, greenish yellow on lower mandible at base and on rictus. Legs and feet light flesh-brown, dark on joints and on claws. Iris brown. Length 5 inches. Wing 3, 0·4 longer than tertiaries, 0·25 short of tail; first quill 0·45 shorter than the second and longest. Bill in front 0·48, from gape 0·55. Tibia bare only just above joint; tarse 0·78; middle toe and claw 1·08. Tail about 1·2, composed of apparently six stiffish feathers, entirely covered by upper and lower coverts, and hard to distinguish.

XLVI.—*On a Collection of Fishes from Chefoo, North China.*
By Dr. ALBERT GÜNTHER, F.R.S.

THE collection of Chinese fishes sent by Mr. Swinhoe to the British Museum, and described in this volume (pp. 239–250), has been supplemented by a second, smaller one, made by the same gentleman at Chefoo. It contains several new forms, beside some others which are worthy of notice.

1. *Sebastes nigromaculatus*, sp. n.

D. 12 | $\frac{1}{12}$. A. $\frac{3}{8}$. L. lat. 75.

The height of the body is a little less than the length of the head, and one third of the total (without caudal). Scales rather irregular. Upper surface of the head scaly, flat, with very low plain ridges, without prominent spines. Superciliary edge not elevated; the width of the interorbital space is one fifth of the length of the head. *Lower margin of the præ-orbital and edge of the præoperculum with acute spines*, thus distinguishing this species from *S. inermis*. The maxillary reaches nearly to the vertical from the hind margin of the